

REMARKS

Applicant has carefully reviewed the Examiner's Final Office Action dated January 26, 2004, in which claims 22-26, 28-30, 32, 33, 35, 36, 38 and 39 are rejected under 35 U.S.C. §103(a) as being unpatentable over the admitted prior art in view of Blackadar et al. (U.S.P.N. 6,336,365).

Claim 22 has been amended to overcome the §103 rejection without adding any new matter, claims 22-26, 28-30, 32, 33, 35, 36, 38 and 39 have been canceled from further prosecution, and new claims 41-49 have been added without adding any new matter. Specifically, the phrase "to cancel out vibrations generated from the capacitors", which has been added to the mounting step of the currently amended claim 22, is supported by page 6, line 23 to page 7, line 7, page 9, lines 6-10; page 10, lines 12-15; page 13, lines 9-14; page 14, lines 13-19 and Figs. 5A and 5B. Claims 41-43 are supported by page 7, line 26 to page 8, line 4; page 11, lines 2-5; and page 11, lines 6-9, respectively. Further, claims 44-49 are supported by page 8, lines 12-15; page 9, lines 6-10; page 15, lines 10-11; Fig. 3, 1a and 1b; page 15, lines 12-13; and page 15, lines 15-17, respectively.

In view of the amendments made above and for the reasons stated below, it is respectfully submitted that claims 22 and 41-49 are now in condition for allowance, and, accordingly, Examiner's allowance thereof is respectfully requested.

Rejections under 35 U.S.C. §103(a)

The Examiner rejected claims 22-26, 28-30, 32, 33, 35, 36, 38 and 39 under 35 U.S.C. §103(a) as being unpatentable over the admitted prior art in view of Blackadar et al. (U.S.P.N. 6,336,365).

By way of review, the present invention is directed to a method for mounting multilayered ceramic capacitors on a circuit board to cancel out vibrations generated from the capacitors, as defined in step (b) of the amended claim 22 (and supported by page 6, line 23 to page 7, line 7; page 9, lines 6-10; page 10, lines 12-15; page 13, lines 9-14; page 14, lines 13-19 and Figs. 5A and 5B). Specifically, a circuit board, on which every two lands are formed at substantially plane-symmetrical positions and connected each other, is prepared, as defined in step (a) of the amended

claim 22 and, then, the capacitors are mounted on the lands to cancel out vibrations generated from the capacitors, as defined in step (b) of the amended claim 22.

In contrast, Blackadar et al. disclose a method for monitoring an acceleration of an object by using one or more transducers. As illustrated in col. 11, lines 39-50, mounting of each transducer 404, 404a and 404b on the flexible beam 302 may not affect the position of a neutral axis 418, which separates one portion subjected to tension forces from the other portion subjected to compression forces. Specially, as shown in Figs. 4A-4C, 5A-5C and 6A-6C and as illustrated in col. 11, line 64 to col. 12, line 2, the neural axis 418 passes only through the beam 302 and does not pass through either of the transducers 404, 404a and 404b, regardless of whether either or both of the transducers 404a and 404b are attached to the beam 302. In other words, the supports 408a and 408b may not be interconnected with the neutral line 418, as shown in Figs. 4A-4C and Figs. 5A-5C.

Since, therefore, a voltage generated by a transducer 404a which is subjected to tension forces is different from another voltage generated by an opposite transducer 404b which is subjected to compression forces, it is natural that every two supports at their plane-symmetrical positions in the transducers 404a and 404b may not be connected to each other. In the result, in Blackadar et al., it is not required to dispose every two supports at their plane-symmetrical positions are connected to each other.

Further, the applicant's admitted prior art (AAPA: Specification pages 1 and 2) discloses a conventional circuit board having a single capacitor thereon in which the vibrations of the capacitors, i.e., audible sounds, are generated due to piezoelectric effects. Therefore, AAPA is directed to a conventional circuit board with a defect to be cured in the present invention.

Specifically, Blackadar et al. are totally different from the present invention in that:

1) Blackadar et al. disclose that every two plane-symmetrical supports (not shown) of a pair of opposite transducers 404a and 404b disposed on a flexible beam 302 may not be connected with each other so that the neutral axis 418 is not significantly affected and therefore does not pass through either of the transducers 404a and 404b, while the present invention employs that every two lands at plane-symmetrical positions in two capacitors are connected to each other to cancel out vibrations generated from the capacitor;

(2) Blackadar et al. disclose a method for detecting whether the flexible circuit board 302 is bent or not by using one or more transducers 404, 404a and 404b with a piezoceramic dielectric therein in order to detect the acceleration of an object on the flexible circuit board, while the present invention is directed to a method for mounting capacitors on the lands on a circuit board in order to cancel out vibrations generated from the capacitors;

(3) Blackadar et al. detect electrical signals, i.e., voltages, generated from the transducer by mechanical deformation incurred therein. The present invention, however, applies the voltages with the audible frequency to two symmetrically-positioned capacitors, respectively, to obtain required capacitance therefrom while reducing noises therefrom; and

(4) Blackadar et al. may use one or more transducer 404 (or 404a and 404b) to detect the bending of the flexible circuit board 302, while the inventive method may not be implemented by one capacitor but must mount two symmetrical capacitors and two symmetrical lands on a circuit board at substantially plane-symmetrically to cancel out vibrations generated from the capacitor, as defined in claims 22, 28 and 35.

Therefore, it is respectfully submitted that Blackadar et al. are conceptually and materially different from the present invention and that none of the features defined in the pending claims are disclosed, taught or even implied in Blackadar et al.

Accordingly, it is respectfully submitted that the Examiner's hindsight combination of Blackadar et al. with a prior art is entirely improper in the absence of any suggestion, teaching or motivation given in any of the prior art references to do so, and inasmuch as one skilled in the art would have no reason to make such combination.

Furthermore, even assuming, arguendo, that such combination were proper, such combination still cannot render the present invention obvious because neither Blackadar et al. nor the prior art disclose or even imply the present invention. Accordingly, even if every single disclosure contained in each of the references is selectively chosen and stacked together against the present invention, such combination cannot possibly suggest to an ordinary person skilled in the art the inventive features of the present invention.

Accordingly, it is respectfully submitted that claim 22 defines an unobvious and patentable invention over and above the prior art references, including Blackador et al. and the prior art collectively or individually, and is, therefore, allowable.

It is also believed that claims 41-49 directly depending on claim 22 are allowable for the same reasons indicated with respect to the amended claim 22 further because of the additional features recited therein which, when taken alone and/or in combination with the features recited in the amended claim 22 remove the invention defined therein further from the disclosures made in the prior art references.

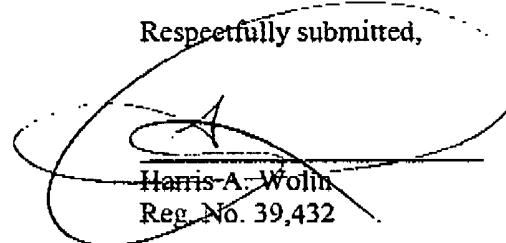
Applicant believes that this is a full and complete response to the Final Office Action of January 26, 2004. For the reasons discussed above, applicant now respectfully submits that all of the pending claims are in complete condition for allowance. Accordingly, it is respectfully requested that the Examiner's rejections be withdrawn; and that claims 22 and 41-49 be allowed in their present form.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects, in order to place the case in condition for final allowance, then it is respectfully requested that such amendment or correction be carried out by Examiner's Amendment and the case be passed to issue.

Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, the Examiner is invited to telephone the undersigned.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,



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